

extent that fact does permit of the zonal arrangement of the earth." But he goes on to add, with strange disregard of facts, "only, however, as concerns the arctic regions" ! although he does later make the admission : "It is chiefly marine organisms which show a close interdependence of temperature and distribution."

Lack of space forbids a detailed analysis of the book, which, notwithstanding much that is unphilosophic and objectionable, and many loose statements, contains a great deal of information of value to the general reader, while not a few special points connected with distribution are discussed with ability and fairness. But on the whole the make-up and general character of the book is such as to suggest that it was prepared at the solicitation of a publisher in search of a work on this subject to fill a gap in a projected series of publications on natural history rather than from any innate fitness or desire on the part of the author to write on this particular topic. In other words, that it comes very close to the line of scientific hack-work.—J. A. A.

**Townsend on the Birds of Cocos Island.**<sup>1</sup>—It was Mr. Townsend's good fortune to be one of the first ornithologists to visit Cocos Island. It is of volcanic origin, and although only four miles long by three wide is heavily forested and well adapted to support a resident land-bird fauna. Situated midway between the mainland at Costa Rica and the Galapagos, the affinities of Cocos birds are of unusual interest. If the islet is simply an isolated volcanic cone, in other words, a true oceanic island, it would be natural to suppose that its resident land-birds would be derived from the mainland. But if Cocos is a portion of the submerged land which, as Dr. Baur<sup>2</sup> claims, once connected the Galapagos with the continent, we might expect to find a Galapagan element in the Cocos avifauna. Of the four species of land-birds secured by Mr. Townsend, *Dendroica aureola*, is Galapagan, *Cocornis agassizi*, and *Nesotriccus ridgwayi*, described as the types of new genera, are the obvious representatives respectively of the Galapagan *Cactornis scandens* and *Eribates magnirostris*, while *Coccyzus ferrugineus*, previously described by Gould from Cocos, has no near relative, though the genus *Coccyzus* is represented in the Galapagos by the mainland *C. melanocoryphus*. The affinities of the Cocos avifauna are therefore clearly Galapagan and give support to Dr. Baur's theory.

The previously little known *Creagrurus furcatus* was found in marshes at Malpelo, and five species of Petrels are given from the vicinity of the Galapagos.—F. M. C.

<sup>1</sup> Birds from Cocos and Malpelo Islands, with Notes on Petrels obtained at Sea. By C. H. Townsend. Bull. Mus. Comp. Zool., Vol. XXVII, No. 3, July, 1895, pp. 121-126. Two colored plates.

<sup>2</sup> American Naturalist, 1891, pp. 217-229, 307-326.